
VII. OPERATIONS AND MAINTENANCE PROCEDURES AND CODES

A. MECHANISMS FOR REDUCING EXPOSURE TO ASBESTOS

Initial Cleanup

When asbestos-containing materials (ACM) are present on structural steel members or overhead ceilings and mechanical areas, asbestos fibers have probably been released from the ceiling, along with other materials such as perlite or vermiculite, and have settled onto walls, furniture, floors, etc. Because most asbestos-containing ceiling materials contain chrysotile asbestos, a thorough initial cleaning is imperative to remove the contaminants from those surfaces and thereby reduce the possibility for fiber entrainment.

Fibers may be released from the ceiling materials due to convection currents, vibrations from air handlers, and general building settling. The air currents caused by people walking, sweeping, mopping, and other air flows reentrain those once-settled fibers back into the air. The fibers later settle, and the cycle resumes. Those fibers that are small enough to be entrained and suspended in air are the ones which cause serious bodily harm. The following steps should be taken to remove airborne as well as settled asbestos fibers.

Use of Water

During asbestos cleanup all references to "wet wiping" or "wet mopping" refer to that activity using nonamended water. However, amended water should be used when wetting the asbestos-containing material before repair or abatement. Amended water is water that has a surfactant added to reduce the surface tension, thereby retarding evaporation and increasing penetrability of the asbestos-containing materials. Most commercial products are a 50-50 mixture of polyoxyethylene esters and polyoxyethylene ethers with approximately three percent emulsifier. The product is purchased in a concentrated form and diluted with water. Approximately one to three tablespoons of concentrated surfactant are added to a five-gallon pail of water, depending on the wetness desired. Refer to specific instructions by the manufacturer of the surfactant.

Order of Initial Cleanup of an Area

1. HEPA vacuum all sills, wall protrusions, signs, air vents, suspended light fixtures and other immovable fixtures.
2. Lightly mist the air with water, starting high at the ceiling and ending low to the ground.
3. Wet wipe all areas previously HEPA vacuumed.
4. Wet wipe all walls, excluding areas with sprayed-on asbestos-containing materials.
5. HEPA vacuum all carpets twice.
6. Wet mop the floors.

Disposable Mop Heads/Cloths

All wet wiping and wet mopping should be carried out using disposable cloths and/or disposable mop heads. NOTE: All items contaminated with asbestos fibers must be disposed of in six-mil polyethylene bags and properly labeled as per EPA regulations. More information on disposal bags is found below. The most economical method for obtaining disposable cloths/mop heads is to purchase a large roll of muslin or similar cotton type material and to cut out wiping cloths, wet mop covers, and dust mop covers.

Wet-wipe cloths (approximately 18" x 18")

Wet-mop covers (40" x 15")

Dust mop covers (24" x length of mop head)

The covers are folded over the mop head and either stapled or twist-tied. When the cloth becomes full of debris, the cover should be removed and disposed of in six-mil bags. All cloths should be rolled into tight balls for disposal to allow for increased bag capacity.

Disposal Bags

Each building should have a location where asbestos disposal bags are kept. These areas should be located on opposite ends of the building and out of the access of building occupants and noncustodial personnel. The six-mil polyethylene bags should be kept closed at all times and twist-tied. When the bag becomes full, it should be twist-tied and placed in another six-mil bag and again twist-tied. The full bags should be placed in a 55-gallon steel or fiberboard drum and disposed of in an approved landfill. Until time for disposal, all full bags and drums should be kept away from extreme heat, wet areas, and areas accessed by noncustodial personnel. If the bags are not punctured or damaged, the drums may be cleaned and reused. Otherwise, they should be disposed of as contaminated waste.

HEPA Vacuuming

HEPA vacuum cleaners are to be used for the purpose of cleaning sills, wall protrusions, and carpets. As mentioned in the *Use of Water* section above, the first stage of an initial cleanup is vacuuming of the above. A HEPA vacuum must be able to filter out 99.97% of all fibers greater than 0.3 microns in length. Most HEPA vacuums have four filters. The initial paper filter must be changed on a basis similar to a non-HEPA, i.e. when it becomes full. The secondary filter should be changed every month, depending on use. The tertiary cloth filter should be cleaned or replaced every six months. The HEPA filter, under normal conditions, needs to be replaced every two years or more, depending on brand, usage, etc. When any one of the filters needs to be changed or cleaned, it must be done outside of the building and removed very slowly to reduce the possibility of a sudden burst of fibers to the breathing zone. An approved respirator and disposable coveralls must be worn during filter changing. Upon removal, all filters must be disposed of as contaminated waste.

Personal Protection

The following should be worn during initial cleanup of all buildings with asbestos-containing materials, as well as the times when there is a likelihood of coming into contact with asbestos-containing material.

1. Disposable Coveralls - A "Tyvek" brand or similar disposable coverall should be worn over the clothes to prevent capturing asbestos fibers on the worker's clothing. For ease of movement an extra-large size should be worn.

2. Respirators - A respirator with disposable cartridges approved for asbestos dust by NIOSH should be worn at all times during initial cleanup and during emergency repair operations. The respirator should be fitted according to instructions provided by the manufacturer to prevent excess inhalation of fibers.

All disposable respirator cartridges and coveralls should be rolled and disposed of at day's end in six-mil asbestos disposal bags.

After the wet cleaning of all building areas and removal and disposal of all contaminated material, the building should be relatively asbestos-free, except for that contained in the original material. The following routines should be employed to retain this asbestos-free condition after the initial cleanup.

Daily Use of Disposable Mop Heads

To prevent fiber entrainment there should be no dry mopping or sweeping in areas where friable asbestos-containing materials are located. Until all asbestos materials are removed from the ceiling, all daily mopping should be carried out with dampened disposable mop heads. Disposable cloths on mop heads cannot be reused daily and should be changed at day's end. Contaminated mop water should be filtered through a five micron filter and disposed of in a sanitary sewer.

Weekly Cleaning

In addition to the regular daily activity of mopping with disposable mop heads, a weekly cleaning of walls and fixtures is to be conducted. All walls and fixtures should be wet wiped and the cloths disposed of in six-mil disposal bags.

Custodial Inspection

On a daily basis during routine custodial activity, the building custodians should keep a constant check for signs of contact damage, developing water damage and dislodgment of ceiling material.

Water Damage

After a preliminary inspection by the Asbestos Coordinator, all areas of water damage should be noted and marked with a colored spray encapsulant. From that time on, any new water damage area which develops should be brought to the attention of the Asbestos Coordinator. Any new development in water or contact damage should be noted and described on a Change of Status Form. The custodian should look for discoloration of the asbestos material. The first signs of water penetration will show as a discolored brownish ring. The ring will gradually spread to form a complete brown spot. The second stage, and the stage when there is a higher fiber release, will be indicated by a white/brown "snowflake" ring on the perimeter of the spot. The third stage will be a gradual filling of the discolored area with the white "snowflake" appearance. The fourth and final stage will be dislodgment of the material. It is very important to stop the water leakage during the first stage.

Contact Damage

Areas of existing contact damage should be noted on the floor plan for each building or other appropriate document. Any signs of continued damage by building occupants, workers, etc., should be called to the attention of the Asbestos Coordinator.

B. RESPIRATORY PROTECTION PROGRAM

Introduction

This written respiratory protection program has been established in accordance with the respiratory requirements of 29 CFR 1910.134 and 29 CFR 1926.58. These are general guidelines which are more stringent than OSHA requirements.

During sampling and inspection of materials suspected of containing asbestos or during renovation activities involving asbestos-containing materials, employees may be exposed to high concentrations of asbestos fibers for short periods of time. When an employee is exposed to concentrations of airborne toxic materials which are above the maximum standards established by OSHA, the law requires implementation of feasible engineering controls and/or administrative controls to reduce employee exposure. For the subject abatement activities, these controls are not feasible. As an alternative, the employer must provide respiratory protection for employees conducting sampling, inspection or abatement work with asbestos-containing materials. In addition to providing respiratory equipment, the employer has the responsibility of implementing a respiratory protection program. The following sections provide for the establishment of standard operating procedures for the respiratory protection of employees.

Designation of a Program Administrator

A program administrator should be selected to be responsible for the implementation of and adherence to the provisions of the respiratory protection program.

The Worker is Exposed

For the purpose of this program, the only hazard considered is airborne asbestos fibers. Accordingly, during any sampling or inspection of materials suspected of containing asbestos that directly disturbs the material, an air-purifying respirator should be worn. During any asbestos abatement projects which directly disturb the asbestos-containing material, Type "C" positive pressure air-supplied respirators should be worn. However, during minor operations and maintenance abatement and repair, an air-purifying respirator shall be sufficient. During cleanup and waste removal activities, air-purifying respirators should be worn by all affected personnel.

Respirator Fit Tests

Each employee determined medically fit to wear a respirator shall be qualitatively fit-tested upon receiving the equipment and semi-annually thereafter. The type of fit test conducted depends on the respirator type. The manufacturer's literature should be consulted to determine the proper fit test.

Problems in fitting a respirator may result if facial hair prevents a good seal from forming between the skin and sealing surface. Corrective lenses that have temple bars or straps may prevent proper sealing and should not be used when a full-face respirator is worn. Contact lenses should not be worn while wearing a respirator. A properly fitted respirator may stretch the skin around the eyes, thus increasing the possibility that the contact lens will fall out.

Selection and Use of Respiratory Protection Equipment

Respirators used should be selected from those approved by NIOSH for use in atmospheres containing asbestos fibers. A NIOSH-approved respirator contains the following: an assigned identification number placed on each unit, a label identifying the type of hazard the respirator is designed to protect against, and additional information on the label which indicates limitations and identifies component parts approved for use with the basic unit.

The approved respirator should be worn for the existing working conditions specified as follows:

| Asbestos Concentrations | Required Respirator |
|-------------------------|---|
| Up to 0.1 f/cc | Half-mask air-purifying respirator equipped with high-efficiency (HEPA) filters. |
| Up to 0.5 f/cc | Full facepiece air-purifying respirator equipped with high-efficiency (HEPA) filters. |
| Up to 1.0 f/cc | Any powered air-purifying respirator equipped with high-efficiency (HEPA) filters. Any supplied-air respirator operated in a continuous flow mode. |
| Up to 10.0 f/cc | Full facepiece supplied-air respirator operated in pressure demand mode. |
| > 10.0 f/cc | Full facepiece supplied-air respirator operated in pressure demand mode equipped with an auxiliary positive pressure self-contained breathing apparatus. |

C. MINOR ABATEMENT AND REPAIR TECHNIQUES

The following are general guidelines; however, all abatement and repair shall be done by certified personnel in accordance with regulations for asbestos control.

During the time from implementation of the operations and maintenance program until final removal of the asbestos-containing materials, it may become necessary to remove or encapsulate material that has become very friable. There are three primary situations where such action could become necessary:

1. If asbestos ceiling material becomes heavily water damaged from roof leaks, the material will become swollen and lose its bonding capability. During this stage, the material releases many more fibers into the air than undamaged material. To retard fiber release, the material should be encapsulated with a very light bridging encapsulant or the material should be removed. This procedure should only be used for lightly damaged areas. For heavily damaged areas, see 2. below. Although each situation could call for modification of the encapsulation procedure, the basic procedure to encapsulate a small water damaged area is:

- a. Shut down the HVAC system.
 - b. Move all movable fixtures away from the area with water damage after wet wiping.
 - c. Place six-mil polyethylene on the floor and wall (if damage is within a few feet of the wall).
 - d. Patch the area of the roof where the leakage is occurring. Allow at least 24 hours before proceeding with encapsulation.
 - e. Wearing disposable coveralls and respirators, HEPA vacuum the damaged area, holding the nozzle one-half to one inch from the material. Do not brush the material with the nozzle.
 - f. With an airless sprayer or compressed air sprayer set to a fine mist, lightly coat the damaged area with a colored bridging encapsulant. Apply the encapsulant with the sprayer held eight to twelve inches from the material and apply in several passes over the material.
 - g. Allow four to eight hours for fibers to settle. Dispose of plastic and asbestos debris and clean the surrounding area as outlined in the section *Mechanisms for Reducing Exposure to Asbestos*.
2. In some cases the asbestos-containing ceiling material, through water damage or building vibration, has become dislodged and physically separated from the substrate. The material is then ready to break off and fall to the floor, thereby releasing many fibers into the air. The dislodged material should be removed in the following manner while wearing respirator and disposable coveralls:
- a. Shut down the HVAC system and place plastic over the return air grills.
 - b. As in 1 above, wet wipe and remove furniture and place plastic in the area of the fiber fallout.
 - c. Isolate the work area.
 - d. HEPA vacuum the material as in 1.
 - e. Mist the area to be removed with amended water.
 - f. With a utility knife or other cutter, slice through the material to the substrate around the area which is dislodged.
 - g. While one worker holds the HEPA nozzle equipped with a spread cone close to the material, gently remove the dislodged material using a putty knife and place in the cone and/or disposal bag.

- h. Revacuum the affected area.
 - i. As in 1 above, spray a light coating of colored encapsulant on and around the area to retard further fiber release.
 - j. Dispose of plastic in disposal bags and wet wipe and HEPA vacuum the area as described in the "Mechanisms for Reducing Exposure to Asbestos" section.
3. In the event that mudded joint packing or pipe covering becomes deteriorated, damaged, or if the material must be removed to allow work on pipes, valves, elbows, etc. the material must be removed by glove bag operations:
- a. After sealing off the work area and HVAC system and donning respirator and coveralls, cut the sides of the glove bag to fit the size pipe to be worked on and insert the tools needed into the attached tool pocket.
 - b. Attach the glove bag to the working area by folding the open edges together and sealing with staples and tape. (Remember, this sealed area will be supporting the weight of the debris; additional support may be necessary.)
 - c. Seal the edges of the glove bag around the working area with tape or "Velcro" ties to form a tight seal. Slice open the side port to allow entry of the wetting nozzle and HEPA vacuum hose. Insert the nozzle from the portable sprayer and thoroughly wet the area to be removed. The HEPA vacuum hose may then be inserted into the side port and sealed with tape.
 - d. Insert arms into the armholes and glove, and proceed to remove the asbestos from the valve fitting and pipe. Insert a spray nozzle and spray the pipe and any remaining insulation with encapsulant. When the job has been completed, turn on the HEPA vacuum to remove air from the bag.
 - e. After the air is removed from the glove bag, squeeze the bag tightly (as close to the top as possible) and twist seal and tape closed to keep the asbestos material safely at the bottom of the bag. Turn off the HEPA vacuum and remove the hose from the side port, taking care to seal the side port with staples and tape.
 - f. The glove bag may now be cut and removed from the working area, placed into another plastic bag, and disposed of properly.
 - g. Proceed to HEPA vacuum the work area for any residual materials and seal the exposed edges with the proper sealant.
 - h. Once all pipe insulation has been removed, decontaminated and disposed of according to these specifications, the entire work area shall be wet cleaned and/or HEPA vacuumed.

Any time an area of asbestos-containing material has to be encapsulated or removed, it must be recorded and the area must be color coded for reference. NOTE: Emergency encapsulation or removal should be performed by a Special Response Team.

D. OPERATIONS AND MAINTENANCE CODES AND PROCEDURES

OMA - Pipe Insulations and Mudded Joint Fittings

Work area preparation and cleaning shall be in accordance with the requirements previously listed in this section.

Repair minor dents and tears in the protective jacket with duct tape or bridging encapsulant with glass cloth reinforcement. Duct tape should only be used for temporary control until the bridging encapsulant is installed.

If glove bag removal is not feasible, wrap uncovered pipe insulations with protective jackets consisting of a bridging encapsulant with glass cloth reinforcement.

Wrap moderately water damaged or contact damaged pipe insulations with new protective jackets, or replace affected areas. Eliminate the source of the water damage. More severely damaged pipe insulations may require removal by glove bag or gross containment techniques. Request authorization for removal via a work order from the Asbestos Coordinator.

Monitor the condition of the asbestos-containing materials. Color coding of a system's asbestos-containing materials and nonasbestos-containing materials will greatly assist in routine monitoring and detection of problems.

Routinely clean area using procedures covered in the Mechanisms for Reducing Exposure to Asbestos.

OMB - Insulations on Boilers, Breeching, Ducts, etc.

Work area preparation and cleanup shall be in accordance with the requirements previously listed in this section.

Repair minor dents and tears in insulation on boilers and breeching with a bridging encapsulant with glass cloth reinforcement. Duct tape or nonasbestos mastic should only be used for temporary control until the protective jacket is applied.

Wrap uncovered insulations with new protective jackets or coverings consisting of a bridging encapsulant with glass cloth reinforcement.

If damage is more severe, cleanup may involve removing the asbestos-containing materials. Consult with your Asbestos Coordinator if removal is necessary. Use proper abatement techniques covered in the section called Minor Abatement and Repair Techniques.

Minor damage to duct work insulated with ACM should be repaired with a bridging encapsulant with glass cloth reinforcement. Duct tape or nonasbestos mastic should only be used for temporary control until the protective jacket is applied.

If insulated duct work exists above drop ceilings which are missing ceiling tiles, replace the tiles to help keep the asbestos-containing material isolated from the building occupants.

Consider replacing perforated drop ceilings with a sealed barrier to prevent exposure to asbestos-containing materials. Good judgement can yield the most cost effective procedure for exposure control in every case. Refer to abatement techniques outlined previously in this section for the consideration of removal and replacement as opposed to the above methods for different situations.

For all areas with ACM, clean using the *Mechanisms for Reducing Exposure to Asbestos*. Color code or label replaced material to differentiate ACM from nonasbestos-containing material.

OMC - Fireproofing

Work area preparation and cleaning shall be in accordance with the requirements listed in this section.

On a temporary basis, the exposure potential of fireproofing can be reduced by constructing airtight walls and ceilings around the ACM, enclosing the exposed area. This process will disturb the ACM through contact, vibration, etc., so the same isolation and control techniques used for removal projects must be incorporated into this type of work. An enclosure project would generally be applicable only to a small area. Enclosure of a large area often requires such effort and expense that removal is more cost effective and practical.

The fireproofing may be sprayed with an encapsulant if the fireproofing is well bonded to its substrate and is less than one inch thick. This is to be considered a temporary control measure with a life expectancy of five to six years. As with enclosure, isolation and control techniques used for removal projects must be incorporated into encapsulation work. Test results have shown that, due to the impact of the spray, spraying with an encapsulant can entrain into the air more fibers than a gross wet removal project.

If the fireproofing has localized water damage and/or is becoming delaminated in a small area, spot removal of the damaged material may be necessary. Follow techniques outlined on abatement. If the remaining fireproofing is well bonded to its substrate, it can then be encapsulated; however, the source of the water damage must be eliminated.

Use caution when work involves hanging ducts, conduit or pipes, etc., from surfaces sprayed with fireproofing. Avoid disturbing fireproofing whenever possible.

OMD - Acoustical Plasters (Sprayed-On or Trowelled-On)

If the plaster is in good condition, with no delamination, deterioration, or signs of water damage, it requires no immediate attention, but should be carefully monitored for signs of change in status.

If the plaster is water damaged and/or is becoming delaminated from the substrate, it should be removed rather than encapsulated. Encapsulation can make the condition worse by increasing the rate of delamination. The source of the water damage must be eliminated. Authorization and a work order for spot removal should be obtained from the Asbestos Coordinator. Abatement techniques outlined previously should be followed.

Avoid disturbing acoustical plaster by not hanging plants, drilling holes in the ceiling, moving furniture, etc. Work area preparation and cleanup for all types of maintenance and repair work shall be in accordance with the requirements listed previously in this section. When the plaster must be disturbed, mist the affected area with amended water and use a HEPA vacuum to collect fibers being released.

OME - Stored Insulations

Work area preparation and cleanup should be in accordance with the requirements previously listed in this section.

Stored pipe lagging, tank packing, joint compound, fireproofing, and other miscellaneous asbestos-containing materials should be cleaned up and disposed of properly.

If the items are not in a container and there is a potential for exposure, the items should be carefully wet with a light mist and put into an asbestos disposal bag and disposed of properly.

OMF - Debris

Work area preparation and cleanup should be in accordance with the requirements previously listed in this section, except the application of floor plastic, which would not be practical.

Small amounts can be cleaned up using a HEPA vacuum and wet wiping or wet mopping. Dispose of larger pieces by misting and carefully moving the pieces to an asbestos disposal bag to be properly discarded.

OMG - Ceiling Tiles

When ceiling tiles are noted as asbestos-containing materials, precautions can be taken to greatly minimize exposure from the tiles.

Whenever the tiles are cut, broken or damaged, they should be disposed of properly and replaced by new tiles. Tiles should never be broken to fit into an asbestos disposal bag.

If an area is to be renovated or the ceiling totally replaced, the removal should follow site preparation and procedures from minor abatement and repair. Consult with the Asbestos Coordinator and obtain a work order form. Dispose of all tiles as contaminated waste.

Monitor ceiling tiles and report any damage. Maintain condition and follow interim control measures until tiles have been completely replaced.

OMH - Tape/Woven Paper

Asbestos-containing tape is used primarily for sealing seams on duct work. Loose or frayed ends of the tape should be wetted with amended water, cut, and properly disposed. Care must be taken not to damage the tape by ripping or tearing it during this procedure.

Damaged tape should be carefully painted with a bridging encapsulant with minimal overspray or overbrushing. When the tape must be disturbed, mist it with amended water (unless the disturbance is due to the encapsulation process) and use a HEPA vacuum to collect fibers being released.

OMI - Miscellaneous/Cementitious Materials

Fiber release from cementitious (nonfriable) materials is normally extremely low, unless these materials are broken, drilled, sanded or otherwise disturbed. During disturbance, the material should be thoroughly dampened and a HEPA vacuum used to collect fibers being released. Follow the work area preparation and cleanup requirements previously listed in this section. Some examples of cementitious and miscellaneous nonfriable materials that may contain asbestos are:

- Floor tiles
- Wall plasters
- Scratch coats
- Transite panelling
- Exterior Siding
- Friction products
(brake linings, clutches, etc.)
- Tile underlay
- Transite pipes
- Drywall plaster
- Linoleum
- Roofing felts

Vinyl Asbestos Floor Tiles (VAT) - When damaged, vinyl asbestos floor tiles become friable and could present a problem. If spot removal becomes necessary, the following method should be utilized. Seal all doors and grills. Turn off the HVAC system as a safety precaution. Mix amended water to a slightly stronger than normal strength. Spray the entire surface of the tiles to be removed, wait six to eight hours and repeat the spraying. Most vinyl asbestos tile glues are water soluble and the tiles will loosen so that they may be physically removed, placed in a sealed plastic bag, and disposed of as asbestos waste. When the tiles are loose the ends will curl up or under. As a further safety precaution, wear respirator and disposable coveralls. After completion of the project, wet wipe all surfaces in the area. Note: Dispose of the paper-like underlay with the vinyl asbestos tile, as it usually contains asbestos.

OMZ - Other Materials

This code applies to miscellaneous ACM that rarely creates a significant problem but can pose an exposure risk when being damaged or removed. Listed are some of the asbestos-containing materials that fall into this classification. If an asbestos-containing material is not directly addressed in the operations and maintenance codes, an operations and maintenance procedure may be applied using one or more of the codes that involve similar materials.

Batt Insulation - Cutting or tearing the asbestos-layered paper backing can cause fiber release. Wet the backing with amended water and wear a half-face respirator if batting needs to be cut or moved.

Friable Hardboard - Precautions should be taken to minimize exposure from the hardboard. Replace broken or damaged hardboard with a nonasbestos material. If removal is necessary, wet the material and try to remove it in one piece. The hardboard should never be broken up to fit into an asbestos disposal bag.

Vibration Joint Cloth - Vibration joint cloth is most often found on duct work near air handlers. Loose or frayed ends should be wet with amended water or a diluted encapsulant. Carefully cut and remove the joint cloth and dispose of properly.

Wiring - Care should be taken when cutting or stripping asbestos wire insulation. In general, it is not a safe practice to wet the wire insulation. Dispose of the stripped insulation properly.

Carpet - Carpets normally do not contain asbestos but can become contaminated if located in a room with damaged asbestos-containing ceiling plaster or fireproofing. Always clean with wet methods, while wearing respirators. If carpet is to be replaced, obtain a work order from the Asbestos Coordinator, remove and dispose of it as contaminated waste.

Earth Floors - When mechanical insulations located in crawl spaces or tunnels deteriorate or are damaged, the earth floors beneath them can become contaminated. Often the asbestos materials are broken up and ground into the loose earth by maintenance workers performing work in these areas. If the contamination is found to be limited to the loose, dusty portion of the surface of the floor, cleanup with a HEPA vacuum will normally suffice. If the asbestos is ground into the earth floor by foot traffic or if the floor is dry and cracked, it may be necessary to HEPA vacuum the loose material and then remove the outer two to three inches of the firm soil. In either case, the remaining floor surface should be covered with a thin layer of gunnite (if the area is not too large) or sprayed with a penetrating soil encapsulant made specifically for this purpose such as "EarthKote" by American Coatings Corporation. Apply such soil treatments as per the manufacturer's recommendations.

E. OPERATIONS AND MAINTENANCE CODES

| <u>Q & M CODE</u> | <u>MATERIAL REFERENCED</u> | <u>BULK SAMPLE CODES</u> |
|-----------------------|--|--------------------------|
| OMA | Pipe lagging and mud-packed joints | BS - E,F,G,N,O,P,Q |
| OMB | Insulation on boilers, tanks, breeching, and ducts | BS - H,I,U,T |
| OMC | Fireproofing | BS - R,C |
| OMD | Acoustical plasters | BS - A,B,D |
| OME | Stored Insulations/ Materials | BSY |
| OMF | Debris | BSX |
| OMG | Ceiling tiles, panels | BS - K,L,V |
| OMH | Tape/woven paper | BSJ |
| OMI | Miscellaneous nonfriable materials | |
| OMZ | Other | BS - M,S,W,Z |